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| EXAMINER |
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POTTER, WESLEY A

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| ART UNIT | PAPER NUMBER |
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4117

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02/17/2009

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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|------------------------------|--------------------------------------|---------------------------------------|--|
| Office Action Summary | Application No. 10/596,635 | Applicant(s) ASAMURA ET AL. | |
| | Examiner WESLEY POTTER | Art Unit 4117 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 March 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) 1-10 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 11-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
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| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>20060619</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

A preliminary amendment was received on June 19th, 2006. The amendment has been entered; claims 1-10 are cancelled, claims 11-22 are pending.

Claim Objections

Claim 18 is objected to because of the following informalities: the limitation “flange section” appears to have been inadvertently changed to “flange portion” in the last line of the claim. Appropriate correction is required.

Claims 21 and 22 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claims 11 and 17 refer to a vehicle engine, a fuel pump assembly, and a fuel tank with details such that a vehicle comprising these features is inherent.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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Regarding claim 15 – It is unclear to the examiner how the disclosed fuel passage is arranged so as to overlap itself and it is therefore unclear what the applicants actually mean by “overlap itself” in line 5 of claim 15. For the purposes of examining this claim, the examiner will interpret “overlap itself” to mean that the fuel passage has some portion that extends generally parallel to a radial line from the cylindrical pump body.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 11, 15-19, 21, and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ootaka et al. – U.S. Patent No. 6,679,292 (henceforth cited as ‘Ootaka’) and Torikai et al. – Japanese Publication JP 2003–074436 (henceforth cited as ‘Torikai’).

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Regarding claim 11 – Ootaka teaches a mounting structure for a fuel pump of a vehicle engine the mounting structure comprising:

a fuel pump assembly (20) including a cylindrical pump body and a suction end (23) of the pump body;

a housing (22) enclosing the cylindrical pump body, a flange section (21) of the housing arranged to abut an outside area (30) surrounding an opening (12) in a fuel tank (10); and

a mounting plate (40) arranged to cover the flange section on an outside of the fuel tank, the fuel pump assembly arranged to be fixed to the opening through the mounting plate and the flange section.

Ootaka does not teach a filter or that the cylindrical pump body extends generally parallel to a mounting surface of the mounting plate.

However, Torikai teaches a cylindrical pump body (P) with a filter (F) coupled to a suction end (PB) of the cylindrical pump body such that an axis of the cylindrical pump body extends generally parallel to a mounting surface (T) and the cylindrical pump body and the filter are arranged to overlap each other.

It would have been obvious to one of ordinary skill in the art at the time of invention to modify the pump assembly of Ootaka with the cylindrical pump body and filter of Torikai such that the cylindrical pump body extends generally parallel to a mounting surface of the mounting plate in order to reduce the necessary width of the opening in the fuel tank to be useable with a wider variety of tank styles.

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Regarding claim 15 – Torikai further teaches a fuel passage, wherein the fuel passage includes the filter, the cylindrical pump body, and a member (4C) through which fuel flows from the filter to the cylindrical pump body and the fuel passage is arranged so as to overlap itself.

Regarding claim 16 – Torikai further teaches that the cylindrical pump body and the filter are spaced apart from each other in a direction normal to the axis of the cylindrical pump body.

Regarding claim 21 – Ootaka teaches that the mounting structure for a fuel pump is a component of a vehicle (column 3, line 59).

Regarding claim 17 – Ootaka teaches a mounting structure for a fuel pump of a vehicle engine, the mounting structure comprising:

a fuel pump assembly (20) to be arranged within an inner space of a fuel tank (10), the fuel pump assembly including a mounting plate (40) arranged to mount the fuel pump assembly onto the fuel tank, the fuel pump further including:

a cylindrical pump body. Ootaka does not teach any details of a filter.

However, Torikai teaches a filter (F) attached to a cylindrical pump body (P); wherein the cylindrical pump body extends along a mounting surface (T); and the filter is arranged such that at least a portion of the filter is spaced away from the cylindrical pump body in a radial direction of the cylindrical pump body.

It would have been obvious to one of ordinary skill in the art at the time of invention to modify the pump assembly of Ootaka with the cylindrical pump body and filter of Torikai such that the cylindrical pump body extends along a mounting surface of the mounting plate in order

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to reduce the necessary width of the opening in the fuel tank to be useable with a wider variety of tank styles.

Regarding claim 18 – Ootaka further teaches an opening (12) arranged in a bottom surface of the fuel tank, wherein the mounting structure includes a housing (22) enclosing the cylindrical pump body, a flange section (21) of the housing arranged to abut an outside area (30) surrounding the opening in the fuel tank, and the mounting plate extends over the flange section to fix the flange section to the fuel tank.

Regarding claim 19 – Torikai teaches that the fuel pump assembly further comprises a fuel pipe (4C) having a first end (PB) with which the cylindrical pump body is coupled, a trunk portion of the fuel pipe bending (at reference number ‘4’) toward the filter, and a second end with which the filter is coupled, wherein a fuel flow direction in the cylindrical pump body (generally to the left in Figure 1) and a fuel flow direction in the filter (generally to the right in Figure 1) are reversed from each other.

Regarding claim 22 – Ootaka teaches that the mounting structure for a fuel pump is a component of a vehicle (column 3, line 59).

Claims 12-14 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ootaka and Torikai as applied to claim 11 above, and further in view of Kobayashi et al. – U.S. Patent No. 6,655,363 (henceforth cited as ‘Kobayashi’).

Regarding claim 12 – Ootaka and Torikai teach or suggest all the limitations of claim 11. Ootaka and Torikai do not teach or suggest that the fuel tank is a saddle type fuel tank.

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However, in Figures 2 and 3, Kobayashi teaches a saddle type fuel tank (8) arranged to straddle a body frame (2) of a vehicle, wherein an opening in the fuel tank (14) for insertion of a fuel pump assembly is arranged in a side wall surface of the saddle type fuel tank.

It would have been obvious to one of ordinary skill in the art at the time of invention to modify the mounting structure taught by Ootaka to accommodate a saddle type fuel tank in order to save manufacturing costs by using a single fuel pump assembly for a variety of vehicle styles.

Regarding claim 13 – Kobayashi teaches that the opening is arranged in the side wall surface of the saddle type fuel tank, and the filter is disposed below the cylindrical pump body.

Regarding claim 14 – Kobayashi teaches that the opening has an elliptical shape and a longitudinal axis of the opening extends generally horizontally and generally parallel to the axis of the cylindrical pump body (16)

Regarding claim 20 – Ootaka and Torikai teach or suggest all the limitations of claim 18. Ootaka teaches that a longitudinal axis of the opening extends generally horizontally and Torikai teaches that the opening is extends generally parallel to the axis of the cylindrical pump body. Ootaka and Torikai do not teach or suggest that the opening has an elliptical shape.

However, Kobayashi teaches a mounting structure for a fuel pump of a vehicle engine wherein the opening (14) in a fuel tank has an elliptical shape and a longitudinal axis of the opening extends generally horizontally and generally parallel to the axis of a cylindrical pump body (16).

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It would have been obvious to one of ordinary skill in the art at the time of invention to modify the opening taught by Ootaka to have an elliptical shape in order to allow installation of the pump assembly suggested above in low-profile tank shapes.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure and is included on the attached PTO-892.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to WESLEY POTTER whose telephone number is (571)270-7818. The examiner can normally be reached on Monday-Thursday 9:30-5:00, Alternate Fridays 9:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Naeem Haq can be reached on 571-272-6758. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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/W. P./

Examiner, Art Unit 4117

/Naeem Haq/

Supervisory Patent Examiner, Art Unit
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February 11, 2009